

ORIGINAL ARTICLE

A DESCRIPTIVE SUMMARY OF UNLICENSED DENTAL PRACTICE

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ABSTRACT

Despite the fines and action taken by authorities against illegal dental practise, it could not be eliminated and remain a threat to the public's oral health. The aim of this study was to gather holistic evidence on unlicensed dental practice by collating news coverage, scientific research publications, and information on social media activities of illegal dental practitioners. Information on news coverage was collated via Google, Yahoo and Bing while information on research publications was obtained through three databases, Scopus, Pubmed and Google Scholar. Public data from Facebook and Instagram were extracted to gain information on illegal dental services actively provided. Out of 195 news reported regarding unlicensed dental practitioner, only 110 news reported on legal actions received with 81 news reports were on financial punishments, and the rest was on jail terms or probation. For scientific publications, only 13 related publications were found, and the majority were case reports. Despite having a law that stated an unlicensed dentist would be punished, there were more than 170 Facebook, and Instagram users with thousands of followers found actively offering illegal dental services to the public. In conclusion, not much attention was paid by the scientific community on illegal dental practice despite it being a significant public health issue and covered quite thoroughly in the news, and services are still actively offered through social media. This descriptive report helps give a holistic perspective on the illegal dental service providers issue, especially in Malaysia.

Keywords: *Unlicensed dental practise, illegal dentistry, fake dentist, social media*

INTRODUCTION

According to the Malaysian Health director-general, 18 cases out of 46 complaints about illegal dental practitioners were brought to court from 2015 until 2017, despite the fines and actions taken by the government¹. Numerous complaints were received by the Ministry of Health Malaysia from the victims who experienced adverse reactions or unwanted consequences such as infections, gum disease and teeth hypersensitivity after receiving treatment from these unlicensed dental practitioners. A female teenager who had fake braces fixed by a fake dentist in a motel room had suffered from a gum disease after all her teeth were glued together on a dental bracket using a composite material. A licensed dentist took about an hour to detach the materials from her teeth².

According to past research conducted in India, the types of treatment done by illegal dentists include tooth extraction, restoration and prosthodontic work. The treatments were usually done by the roadside with poor hygiene control and by using pliers and screwdrivers³. On the other hand, in Malaysia, news articles reported that the illegal dentists usually offer orthodontic treatments or more popularly known as fake braces treatment done in hotel rooms⁴, and from home to home which

made their services more easily accessible to patients⁵.

Fake dentist claims that they studied about dental procedures from their ancestors and by assisting in dental clinic⁶. Looking at recent trends from news of fake dentists convicted for providing illegal dental services in Malaysia, most of them admitted having learned the trade through the internet, mainly YouTube videos⁵.

Through a brief search, illegal dental practice was covered quite thoroughly in the news, but not much attention was paid by the scientific community judging from the limited scientific articles published. However, a simple keyword search shows that there are quite a few social media users actively promoting their services in social media despite several cases being brought to court and slapped with hefty fines. This is alarming considering in this digital age, more and more people turn to social media for health information but not all have adequate health literacy to differentiate between legit and false health information⁷. It is a public health concern that needs to be addressed. Hence, this study was conducted to gather the following evidence on unlicensed dental practice:

- 1) General information regarding unlicensed dental practice available online
- 2) Published scientific information regarding dental practice
- 3) Dental services provided by unlicensed dental practitioners on social media.

METHODS

Evidence on unlicensed dental practice was collected in three different ways, following the objectives set above. Data collection was done by three researchers (B.A., N.R. and W.S). Prior to the data collection, training was conducted to ensure the standardisation in data collection is achieved. Upon data collection, the three researchers searched and discussed each finding among themselves to reach consensus. Multiple discussion sessions were also conducted with two dental public health specialists to verify the search results.

Information of unlicensed dental practitioners reported online

Three major search engines were used, i.e. "Google", "Bing" and "Yahoo" to collect information on unlicensed dental practitioners reported online. The search keywords were "illegal/ bogus/ quack/ fake/ unlicensed/ unqualified/ dentist/ dental practitioner". Furthermore, the phrase "dokter gigi palsu" that translates to "fake dentist" in Malay was also used. Only pages from news networks were recorded. Illegal practices by licensed dentists were excluded from the study. The time frame was set from 2013 to 2018. All data were extracted and analysed using Microsoft Excel.

Scientific information or published research on unlicensed dental practitioners

Three databases used were "Google scholar", "Scopus" and "Pubmed". A total of eight search keywords were used: "illegal/ bogus/ quack/ fake/ unlicensed/ unqualified/ dentist/ dental practitioner". The time frame was set from 2013 to 2018. All data were extracted and analysed using Microsoft Excel. Figure 1 shows the flow of data selection.

Information of services offered by unlicensed dental practitioners via social media

For information of services offered by unlicensed dental practitioners via social media, Instagram and Facebook were used to collect data about their illegal practice. The search was focused on illegal orthodontic service provision in Malaysia as expanding the search further resulted in unmanageable data. Plus, a more focused recommendation could be developed by limiting the search to activities within Malaysia. Search keywords and hashtags used were "rawatan gigi

murah", "jual braces", "braces murah", fake braces" and "real braces" to initially reach to the fake dentist. The data of active accounts were extracted, compiled and descriptively analysed using Microsoft Excel.

The protocol of this study was approved by the Research Ethics Committee of Universiti Kebangsaan Malaysia (ref: UKM PPI/111/8/JEP-2018-342).

RESULTS

Activities of unlicensed dental practitioners reported online

Total hits differed by search engines from as low as 15 hits for yahoo and 2066 hits for Google. After eliminating irrelevant hits and duplications, the total number of news report that was included in the study for descriptive analysis was 195.

From 195 news reported, news on orthodontics cases had the highest number of coverage (n=58, 29.6%), followed by operative dentistry with 56 news reports (28.6%), oral surgery (n=52, 26.5%) and the lowest was prosthodontics (n=30, 15.3%) There were 215 unlicensed dental practitioners involved from the total of 195 news reported where news involving orthodontics cases had the lowest mean age of unlicensed dental practitioners (23.3 ± 9.5 years old) compared to other disciplines. (Figure 2). As for gender, news on female had the highest number of reports involving illegal orthodontic services (48.8%). (Figure 3).

There were 110 news reports on penalties received by the offenders. Looking at disciplines involved by location, for Malaysian or local offenders, the highest number of illegal dental services reported were those involving orthodontic cases (n=47, 37.0%). In contrast, for overseas news, the most reported discipline was oral surgery (n=52, 76.5%) (Table 1).

Probing further, all 29 cases of jail term or probation reported only involved cases from overseas. Among locally reported news (n=47), news involving orthodontics cases had the highest number of reports on fake dentist fined (n=43, 91.0%). The average amount of fine or bond that needs to be paid by the unlicensed dental practitioners found guilty varied between RM85,000 to RM130,000 per discipline.

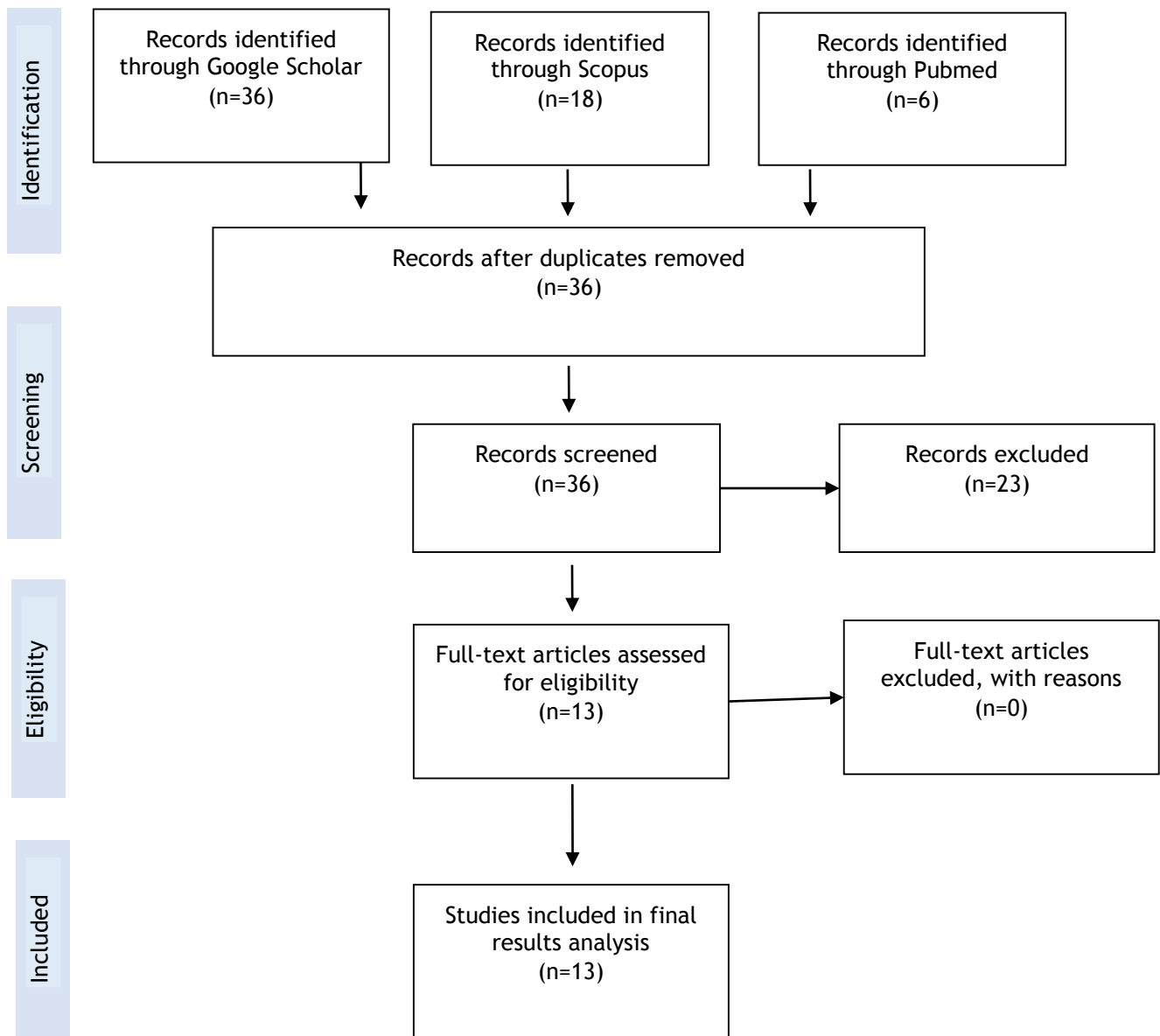


Figure 1: Flow of data selection for scientific research adapted from Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009)⁸

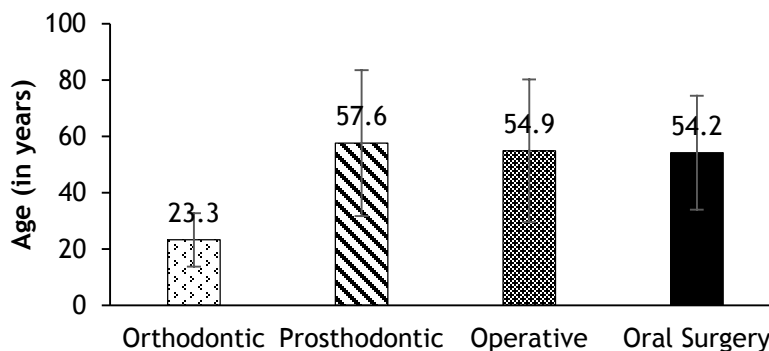


Figure 2. Mean age of unlicensed dental practitioners reported in the news, by discipline (n=215 practitioners, ± 1 S.D.)

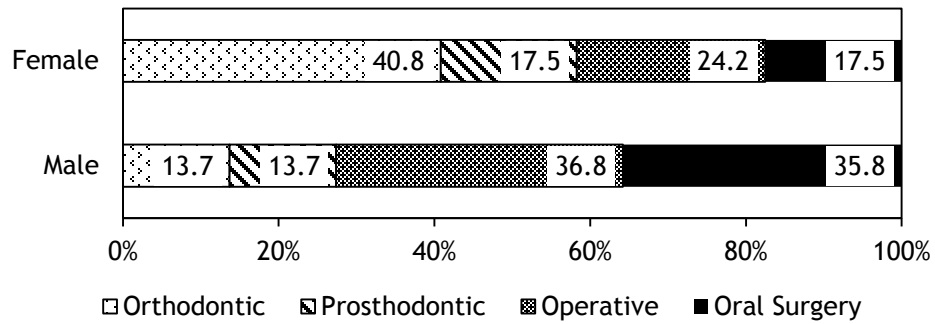


Figure 3. Gender distribution of unlicensed dental practitioners reported in the news, by discipline (n=215 practitioners)

Table 1. Location and penalties received by offenders as reported in the news

	Orthodontic (n=58)		Prosthodontics (n=30)		Operative (n=56)		Oral surgery (n=52)		
	n/ mean	%/ S.D	n/ mean	%/ S.D	n/ mean	%/ S.D	n/ mean	%/ S.D	
Location									
Local (127 offenders)	47	37.0	30	23.6	50	39.4	0	0.0	
Overseas (68 offenders)	11	16.2	1	1.5	4	5.9	52	76.5	
Penalty									
Fine/ Bond (81 cases)	43	53.1	10	12.3	14	17.3	14	17.3	
Fine/ bond (Mean RM)	85,697.70	81,369.10	106,714.30	153,982.20	101,006.70	125,903.60	98,163.90	129,990.80	
Jail/ probation (29 cases)	18	62.1	3	10.3	7	24.1	1	3.4	

Scientific information or published research on unlicensed dental practitioners

Referring to Figure 1, for scientific evidence, from three databases used, a total of 60 research publications were found. Duplicates were removed, leaving 36 articles to be screened. All 36 articles

were screened, and 23 irrelevant articles were excluded. The final number of articles included in the results were 13 articles, out of which 6 were case reports (Table 2). Cases involving prosthodontic treatment were most published in journals compared to other disciplines.

Table 2. Scientific information or published research on unlicensed dental practitioners

No.	Article title	Type	Disciplines
1	Growing quackery in dentistry: An Indian perspective ⁹	Commentary	General dentistry
2	A cross-sectional study to explore the reasons to visit a quack for prosthodontic solutions ¹⁰	Original research	Prosthodontics
3	Acrylic partial dentures fixed to adjacent teeth: a case report on quack dentistry ¹¹	Case report	Prosthodontics
4	Perceptions Regarding Treatment by Dental Quacks and Self-Rated Oral Health Among the Residents of Bhopal City, Central India ¹²	Original research	Prosthodontic, Oral surgery
5	The influencing factors of citizen of Bandung preferences towards dental quack on constructing custom-made orthodontic appliances ¹³	Original research	Orthodontics
6	Fixed-removable partial denture - A case report ¹⁴	Case report	Prosthodontics
7	The curse of quackery in dentistry: A double-edged sword ¹⁵	Case report	Prosthodontics
8	Quackery: A Major Loophole in Dental Practice in India ³	Commentary	Prosthodontics
9	Assessment Of Patients Wearing Auto Polymerized Acrylic Resin Fixed Partial Dentures ¹⁶	Original article	Prosthodontics
10	Clinical blackout in orthodontics ¹⁷	Case report	Orthodontics
11	Is Quackery still a Parallel World of Dentistry- A Case Report ¹⁸	Case report	Prosthodontics
12	Dental Treatment Abuse ¹⁹	Case report	Paedodontics
13	Quackery or mockery: Time to deal and change the scenario ²⁰	Review article	General dentistry

Information of services offered by unlicensed dental practitioners via social media

For advertisement of illegal orthodontic practices on social media, the initial keyword search revealed 1,008 posts on Facebook and 185,287 posts on Instagram. Only active public accounts with posts or activities within the last three months of the data collection time were investigated for further information and summarised in Table 3. A total of 176 social media accounts were found actively selling and providing fake braces

treatment. Most providers were female (95.5%). The number of social media followers on Instagram accounts was higher (249,000) compared to Facebook (17,309). Those who offer illegal orthodontic services are scattered throughout the country. However, the highest number of location disclosed by illegal dental practitioners was in the central region, mainly in Kuala Lumpur and Selangor.

Table 3. Demographics of Facebook and Instagram users offering illegal orthodontic services in Malaysia

	Facebook account (n=88)		Instagram account (n=88)	
	n	%	n	%
Gender (176)				
Male (20)	4	(4.5)	16	(18.2)
Female (156)	84	(95.5)	72	(81.8)
Type of services (176)				
Only sell braces (97)	46	(52.3)	51	(58.0)
Only fix braces (0)	0		0	
Sell and Fix (79)	42	(47.7)	37	(42.0)
Provide other dental treatment (35)	13	(14.8)	22	(25.0)
Location disclosed (129)				
Northern region (23)	9	(10.2)	14	(15.9)
Central region (50)	18	(20.5)	32	(36.4)
Southern region (32)	10	(11.4)	22	(25.0)
East Coast region (23)	11	(12.5)	12	(13.6)
East Malaysia (1)	1	(1.1)	0	(0.0)
*Number of followers (391,712)				
Min per account	2	-	8	-
Max per account	17,309	-	249,000	-

**information available for a limited number of accounts (Facebook n=88, Instagram n=88)*

The mean for the maximum price of illegal dental services offered on Facebook and Instagram was only RM264.60 and RM180.70, respectively. Meanwhile, the price of the services could reach the lowest of RM105.60 for Facebook and RM107.70 for services offered via Instagram.

DISCUSSION

Orthodontics has the highest number of illegal activities reported in the news. The contributing factors to this may be due to the increasing trend of orthodontics services provided by these unlicensed practitioners. In some Southeast Asian countries, teenagers are reportedly wearing fake train tracks glued to their teeth as a symbol of status, wealth and style - despite the fashion fad being blamed for the deaths of at least two youngsters²¹. This could also be seen from the current study’s findings where the mean age of those involved in illegal orthodontic cases was two times lower than other disciplines. Further, it may also be due to fake orthodontics braces being one of the latest fashion items in Asian countries. Originally prescribed to treat malocclusion, fixed orthodontics appliance use has become a symbol of the high social status, exemplified by many celebrities¹³

Most of the cases that were reported to have received penalties were from outside of Malaysia. Within the country, despite having an act (Dental

act 1971²² which is then replaced by Dental Act 2018²³ that regulates the dental service provision in the country, enforcement becomes a challenge, especially when it comes to fake dentist issues.

Among the 13 journal articles found, most of them were mainly case reports. Case report has been widely used in the medical literature even though its scientific value is lower compared to other advanced research methods. Limitation of case report is the low range for disease progression as the timeframes are usually short, researcher bias, over interpretation and the small number of sample studies²⁴. Illegal dental practice is a public health concern. It requires the scientific community to investigate the problem and provide their expertise by scientifically looking at factors affecting people involved with illegal dental practise and propose what would be the best way to prevent them from re-occurring.

Types of treatment provided by illegal dental practitioners on social media are mainly for orthodontics purposes, and there were more followers on Instagram account compared to Facebook. This may be due to young mobile users were really into capturing pictures and instantly sharing via the Instagram app on their mobile phones²⁵. For the location disclosed, the central area of Malaysia, which covered Kuala Lumpur, Putrajaya and Selangor had the highest number of practices advertised. The high number of young

population in this area may also be a contributing factor²⁶. Further, the price range offered by the illegal dentists on social media was more than ten times cheaper than the price of getting orthodontic treatment from legal dental practitioners. This may be the main reason why youngsters were attracted to have braces fixed by illegal dentists¹³.

Looking at the findings from the academic literature published, a lot of these studies were conducted by Indian researchers as street dentistry has always been a problem in the country. However, with the advancement of video making and sharing technology facilitated by social media, we could see a trend in the practice of unlicensed dentistry in South East Asia. This prompted reactions from licensed dental practitioners where they also took to social media to educate the public on the harmful consequences of getting services from illegal dentists.

In the neighbouring country Indonesia, social media campaigns using the hashtag “#kortugi” - short form for “korban tukang gigi” which can loosely be translated as “victims of fake dentists” have been actively conducted over multiple social media platforms including Instagram²⁷, Facebook²⁸ and Youtube²⁹. These campaigns have reached thousands of social media users, and some of their videos educating the public on the danger of engaging the services of unlicensed dentists have over ten thousand views.

Similarly, in Malaysia, a group of multidisciplinary healthcare professionals, including dentists, is actively debunking false healthcare information on Facebook³⁰. This kind of efforts plays a vital role in increasing the public’s health literacy for them to make a more informed and evidence-based decision concerning their health. In addition, more proactive enforcement actions by the authorities are needed to help curb future illegal dental practitioners from doing harms to the public via their YouTube taught skills and knowledge.

This study is limited to only descriptive analysis. The data provided in the news and social media was not uniform, and it was extremely challenging to standardise and conduct statistical analysis on the data. Therefore, we were not able to make any statistically significant inference from this study. As for social media, the information on social media is very dynamic and continuously changes. Therefore, the search for one hashtag had to be conducted within a day as the search result may differ on the next day. This is because the Instagram search result is based on the top hit of the day.

Further, some of the illegal dental practitioner’s social media accounts were set to private, making

it difficult to gain information regarding their practice. Nevertheless, this study provided insights into how illegal dentists or scammers are manipulating the public’s vulnerability and low health literacy on social media. This should be given attention considering more and more people turn to the internet and social media for information, especially post Covid-19 pandemic where it is assumed that there has been a dramatic increase in internet and social media dependency.

Future study should consider identifying reasons people choose unqualified dental practitioners over legally registered dentists. Further investigation from relevant authorities is also needed to explore the reason why current legislation is unable to deter fake dentists from providing illegal dental services to the public.

CONCLUSION

Not much attention was paid by the scientific community on illegal dental practice even though it was covered quite thoroughly in the news and services are still actively offered via social media.

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COMPETING INTEREST

The authors declare no competing interest in conducting this study

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